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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,301	07/03/2003	Siegfried Wornor	(RPB)P-0121845-V US	8264
7590 08/25/2004			EXAMINER	
M. Robert Kestenbaum 11011 Bermuda Dunes NE Albuquerque, NM 87111			SAN MARTIN, EDGARDO	
			ART UNIT	PAPER NUMBER
			2837	

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.		Applicant(s)	
	10/614,301		WORNER ET AL.	
	Examiner		Art Unit	
	Edgardo San Martin		2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/28/03;4/16/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1 – 18 are objected to because of the following informalities:

- With respect to claim 1, a comma should be inserted in lines 7 and 8 after “(3)” and “(4)” respectively, as to clarify the different options;
- With respect to claims 2 – 18, the phrase “characterized in that” should be replaced by - - wherein - -, as to conform with the US patent practice;
- With respect to claims 7 and 8, the use of the phrase “in such a way that” is vague; a clear positive statement should be employed.
- With respect to claim 9, the Examiner understands that this application is a translation of a German patent application, the Examiner considers that the use of the phrase “is realized in such a way that” is vague, the Examiner considers that the language of the claim should be changed to a clearer positive statement, e.g. “...wherein the switching unit can activate the second muffler, and additionally activate the first muffler continuously or in several stages.”;
- With respect to claims 17 and 18, it is unclear as to which elements are the mufflers to be considered rear mufflers (for claim

17) and central or front muffler (for claim 18). For purpose of art rejection, the limitations will be considered relative to the structure of the vehicle. In addition, the use of the word "realized" is vague; a clear a positive statement should be employed.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1 – 18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, a broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required

feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 1 recites the broad recitation “an internal combustion engine”, and the claim also recites “in particular, of a motor vehicle” which is the narrower statement of the range/limitation.

With respect to claims 1, 6, 15 and 18, the use of the phrase “and/or” render the claims indefinite because it is not clear if the limitations are to be consider in combination or in the alternative. For purpose of art rejection, the limitations will be considered in the alternative.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1 – 4, 6, 7, 9 – 11 and 17 rejected under 35 U.S.C. 102(a) as being anticipated by Sheidler et al. (US 6,662,554).

With respect to claim 1, Sheidler et al. teach an exhaust gas system for an internal combustion engine, in particular, of a motor vehicle, comprising two mufflers (Fig.2, Items 72 and 76), through which the exhaust gas is able to flow in a parallel fashion, wherein a switching unit (Fig.2, Item 84) is provided which makes it possible to selectively convey the exhaust gas flow of the internal combustion engine only or almost

Art Unit: 2837

exclusively through the first muffler (Fig.2, Item 76) or only or almost exclusively through the second muffler (Fig.3, Item 72) or through both mufflers (Col.1, Line 61 – Col.2, Line 12 and Col.3, Lines 18 - 42) in a parallel fashion, and wherein the two mufflers are realized differently with respect to their muffling effect or flow resistance (Col.3, Lines 18 – 28).

With respect to claims 2 - 4, Sheidler et al. teach wherein the first muffler has a higher muffling effect than the second muffler; or wherein the second muffler has a lower flow resistance than the first muffler, in this manner providing the first muffler being designed for achieving an optimized muffling effect while the second muffler being designed for achieving an optimized power of the internal combustion engine (Col.1, Line 61 – Col.2, Line 33 and Col.3, Lines 18 - 42).

With respect to claim 6, Sheidler et al. teach wherein a control device is provided which actuates the switching unit in dependence on the engine load or the speed of the internal combustion engine (Col.3, Lines 43 – 52).

With respect to claims 7 and 9, Sheidler et al. teach wherein the control device actuates the switching unit so the exhaust gas only or predominantly flows through the first muffler in a low speed range, only or predominantly flows through the second muffler in a medium speed range, and flows through both mufflers in a parallel fashion in an upper speed range (Col.3, Lines 18 - 42).

With respect to claim 10, Sheidler et al. teach wherein two parallel exhaust gas pipe assemblies (Fig.2, Items 62 and 70) are provided, wherein one of the mufflers is respectively arranged in each exhaust gas pipe assembly, and wherein the exhaust gas

pipe assemblies are connected to one another in a communicating fashion upstream of the mufflers (Fig.2, Item 56).

With respect to claim 11, Sheidler et al. teach wherein both exhaust gas pipe assemblies branch off a common master pipe (Fig.2, Item 54) that is connected to the internal combustion engine.

With respect to claim 17, Sheidler et al. teach wherein the first muffler and the second muffler are respectively considered to be rear mufflers with respect to the structure of the vehicle.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheidler et al. (US 6,662,554) in view of Galaitis (US 6,454,047).

With respect to claim 5, Sheidler et al. teach the limitations discussed in a previous rejection, but fail to explicitly disclose the first muffler is designed for muffling low frequencies while the second muffler is designed for muffling high frequencies.

On the other hand, Galaitis teaches an exhaust gas system comprising two mufflers wherein the first muffler could be designed for muffling low frequencies while

the second muffler could be designed for muffling high frequencies (Fig.3; Col.8, Lines 52 – 67).

It would have been obvious to a person with ordinary skill in the art at the time of the invention was made to designed each of the Sheidler et al. muffler to perform at a particular frequency range as taught by Galaitis because as disclosed by Galaitis it would be an obvious matter of design choice dependent upon a desired result.

With respect to claim 15, Galaitis teaches wherein the switching unit contains two switching elements (Fig.3, Items 320A₁ and 320B₁) that are respectively assigned to the first and the second muffler (Fig.3, Items 310A and 310B) and designed for opening or closing the exhaust gas path leading to the assigned muffler.

With respect to claim 16, Galaitis teaches wherein the two switching elements (Fig.3, Items 320A₂ and 320B₂) are respectively integrated into the first and the second muffler (Fig.3, Items 310A and 310B).

5. Claims 12 – 14 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sheidler et al. (US 6,662,554) in view of Flugger US (5,351,481).

With respect to claim 12, Sheidler et al. teach the limitations discussed in a previous rejection, but fail to disclose both exhaust gas pipe assemblies being separately connected to the internal combustion engine and contain a common mixing chamber between the internal combustion engine and the mufflers, wherein the two exhaust gas pipe assemblies communicate with one another via the mixing chamber.

Nevertheless, Flugger teaches an exhaust gas system comprising two exhaust gas pipe assemblies (Fig.1, Items 38 and 40) and two mufflers (Fig.1, Items 54 and 56),

wherein both exhaust gas pipe assemblies being separately connected to an internal combustion engine (Fig.1, Item 20) and contain a common mixing chamber (Fig.1, Item 50) between the internal combustion engine and the mufflers, wherein the two exhaust gas pipe assemblies communicate with one another via the mixing chamber (Col.3, Line 55 – Col.4, Line 9).

It would have been obvious to a person with ordinary skill in the art at the time of the invention was made to employ the Flugger exhaust gas pipe assemblies configuration with the Sheidler et al. design because it would increase the engine horsepower and torque, performance, brake torque and horsepower over a wide range of engine operating speeds.

With respect to claim 13, Flugger teaches wherein a third muffler (Fig.1, Item 50) is provided, wherein the two exhaust gas pipe assemblies communicate with one another in this third muffler (Col.3, Line 55 – Col.4, Line 9).

With respect to claim 14, the obvious combination of the patents to Sheidler et al. and Flugger teach wherein the switching unit is integrated into the third muffler.

With respect to claim 18, the obvious combination of the patents to Sheidler et al. and Flugger teach wherein the third muffler is considered to be a central muffler or a front muffler with respect to the structure of the vehicle and the location of the first and second mufflers.

Allowable Subject Matter

6. Claim 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

7. The attached hereto PTO Form 892 lists prior art made of record that the Examiner considered it pertinent to applicant's disclosure.

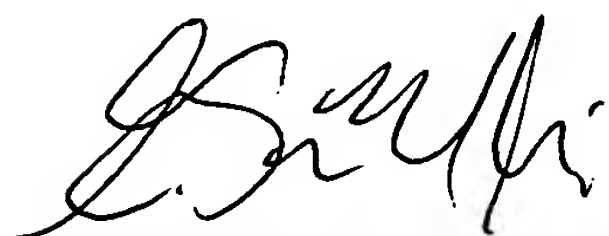
Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edgardo San Martin whose telephone number is (571) 272-2074. The examiner can normally be reached on 8:00AM - 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin can be reached on (571) 272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2837

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Edgardo San Martín
Patent Examiner
Art Unit 2837
Class 181
August 22, 2004